THE MARINE RECORD.

DEVOTED TO COMMERCE, ENGINEERING AND SCIENCE.

VOL. VII. NO. 6. CLEVELAND, O., FEBRUARY 5, 1885. $2.00 PER ANNUM SINGLE COPIES 5 CENTS

AROUND THE LAKES.

CLEVELAND.

Messrs. Bradley have put extensive repairs on the barge Sandusky.

The admiralty docket was called in the United States District Court Tuesday morning last, but the cases will not be tried until later in the term.

The compound engine for the new iron steamer on the stocks at the Globe Shipbuilding Company's yard is about finished. The iron ship is being pushed along. About one hundred and sixty men are at work on her.

The libelant in the case of Frederick Botson against the tug John Martin has accepted the amount tendered in court in full satisfaction of his claim and the case has been dismissed. The action was brought to recover $88.92, due for wages as cook. The amount received by the libelant was $31.98.

Engineer J. B. Wood has been summoned as an expert in a case involving consequential damages, caused by sparks from the steamer Oconto setting fire to a building. This is one of a series of cases against the steamer, and will be heard at Oshkosh. Mr. Wood will start for Oshkosh on Sunday.

President Arthur has issued a proclamation in accordance with the new shipping bill, suspending the tonnage tax on all vessels arriving in the United States from any port in the province of Ontario, of San Juan, and other places, the government of said provinces having notified the president that they do not collect tonnage tax from American vessels. The measure went into effect on the 3d inst.

LUDINGTON.

Special Correspondence Marine Record.

The wrecking expedition has succeeded in releasing steamer No. 1 and took her into the mouth of Ludington piers January 30. She lies now between the piers and is being lightered by steamer No. 2. The weather is very severe and steamer No. 2 has been fast in the ice the past week. She succeeded in releasing herself yesterday.

D. D.

KINGSTON.

Captain Taylor, marine inspector, of Kingston, inspected the steamboats in the harbor at Gananoque the early part of the week.

The K. & M. Company are converting the schooners Hyderabad and Bangalore into barges.

Captain Craig is in Quebec negotiating for the purchase of a fast excursion steamer for use on the St. Lawrence next summer.

GREEN BAY.

A line of freight and passenger steamers will operate between here and Buffalo the coming season in the interest of the Green Bay, Winona, & St. Paul and Lackawanna roads.

GRAND HAVEN.

At 2 o'clock on the morning of the 29th the steamer Oneida took advantage of a break in the ice and got out into the lake. She will go to the west shore, probably Manitowoc. The steamer Wisconsin and tug Arctic with the help of dynamite have worked the Michigan loose from the ice, and came, with the help of a sail, into this harbor.

AMHERSTBURG.

The Echo says the propeller Alma Munro is for sale. Now embrace the opportunity, marine men, and let Amherstburg become the hailing place for a steamboat.

CHICAGO.

Special to the Marine Record.

Marine business is very quiet and no charters have been made since our last issue.

Captain John Foster, who formerly sailed the schooner city of Green Bay, will sail the schooner C. P. Minch next season.

Captain James T. Kinney, formerly of the schooner Thomas Parsons, will sail the schooner City of Green Bay next season.

Captain John Higgie, formerly of the schooner John Miner, will command the schooner City of Chicago next season.

Captain James Comstock, recently of the schooner E. J. McVea, has been appointed to the command of the schooner John Kelderhouse for the coming season.

Paddy Murphy, formerly engineer of the tug named after him, will go as engineer on the distillery steamer Lucille.

Captain R. Cameron has purchased Captain W. T. Mitchell's one-third interest in the schooner A. J. Dewey; consideration $1,900. Captain Cameron will sail the schooner next season.

The Goodrich steamer Depere was the only arrival at this port this week. She arrived on the 1st, from Manitowoc and other west shore ports, with a cargo of general merchandise.

J. S. Dunham purchased Albert C. Johnson's two-thirds interest in the tug G. W. Gardner; consideration $1,500. Mr. Dunham will spend some $3,500 in repairing the tug and giving her boiler a thorough rebuild.

Captain J. Anderson returned to Milwaukee on Monday, to make another trip with his steambarge Daisy Day, to get a cargo of wheat from Ahnapee. The Captain states that he arrived at Milwaukee from Ahnapee with the Daisy Day on the 28th of January, and that he came through a solid field of ice all the way from Two Rivers point. He is a plucky one and deserves success.

At the Chicago Drydock Company's yard the tug Belle Chase and canal barge Menard have gone out of dock. The repairs on the schooner Metropolis are completed, the tug Brothers is having her deck put on, the schooner Resumption has had her new deck completed, and the schooner Ford River is getting hers on as fast as possible. The deck plank on the steambarge New York has been completed and the covering board is being put on.

Edward McGraw, ship joiner, is busily engaged, with a large force of men, overhauling and reinstating the saloon, cabin and state rooms, also the offices and engine room, on the propeller Peerless, which so narrowly escaped total destruction from fire in December last. The propeller will go into drydock for new arches and other repairs, and will be made as good as new before next season commences.

Captain W. T. Mitchell returned to this port from Sheboygan, Wis., Monday. While at Sheboygan he purchased the schooner City of Sheboygan from the trustees of Raab's estate; consideration, $8,000. The schooner is in excellent condition, having been thoroughly rebuilt by Rand & Burger, at Manitowoc, three years ago, at a cost of $11,700, and last year she received new wire rigging all around and a new raffey and foresail, at a cost of $700. She will carry 17,500 bushels of grain or 300,000 feet of lumber. Captain Mitchell will sail her, and we wish him good luck with his excellent bargain.

T. W.

DETROIT.

Special to the Marine Record.

Feb. 3.—Captain Henry Verne, a mariner well and favorably known on the lakes, crossed the dark gulf on Friday last, in this city, in his forty-seventh year. He followed the lakes for many years, and for a brief period navigated on the Pacific, sailing out of San Francisco. On returning here he, with a brother, purchased vessel stock, but subsequently disposed of it. For the past season or two he has sailed for Captain H. G. Blanchard, of this city. He was upright and honorable in all his business affairs and was held in much esteem by all who knew him. His complaint was throat affection with lung disease. His funeral took place yesterday and was largely attended. He leaves a widow and three children, who deeply mourn his departure.

The Alberta-Osborne case, in the United States District Court, in this city, terminated on Friday last, and I was informed yesterday, by one of the court officials, a decision would be rendered Monday next, which is a day usually set apart for such proceedings, and, of course, is looked forward to with much interest by all in any way interested in maritime affairs. The counsel for the respective litigants addressed the court at moderate length, setting forth in detail the points of evidence favorable to their contention. Judge Brown has already partly condemned the Alberta for maintaining an undue rate of speed in the fog which prevailed at the time of the collision, but has given no clue to his decision as to the culpability of the Osborne. The judge's report on the case will not be unnecessarily delayed.

There is at present on the docket and being heard a collision affair, the parties thereto being Captain James Davidson, of Bay City, as plaintiff, and the tug Roy, defendant. From what I have been enabled to glean of the affair it would appear that sometime last summer Captain Davidson had a raft tied up on the Saginaw river, at or near Bay City, which was run into by the tug aforesaid, for which damages are claimed to the extent of $2,000.

Following this suit is another, of much importance to the parties concerned, which has been dragging along in the courts the past two years, and known as the Mamie-Garland case, a collision affair on the Detroit river by which several lives were lost, chiefly children, who had been out on a picnic excursion.

A few days since the tug John Martin was sold by the United States marshal and brought $3,300, a forced sale at that; also the tug J. W. Bennett, at marshal's sale, at Port Huron, for $6,080, to Captain Gilchrist, of Vermillion, Ohio.

The Detroit river was crossed on Friday last by footmen, for the first time this winter, and has been frozen over ever since. The railroad steamers occupy over two hours in making a crossing. Yesterday I watched the movements of these monster craft, which were barely perceptible, and occasionally they would come to a standstill, but by backing a short distance, and then going ahead with all the power at command, they would gain further progress until again brought to a full stop. The Detroit and Windsor ferry steamers keep an open channel, and usually make crossings every half hour.

Oliver N. Edgerton, an old time resident of this city, and for several years associated with his uncle, the late Oliver Newberry, in the forwarding business, died on Friday last at the age of 63 years. He had a large acquaintance among lake men.

The Detroit drydock is at present without an occupant, and it would be difficult to date back to an instance of the kind. A vessel owner yesterday informed me that shipcarpenter's service could be obtained at $2 per day. In the course of a few days ship repairing will be renewed, and all again be at work, as usual. Yet even this branch of work will be but limited.

I was led into an error regarding the purchase of a tug by Captain Mills, the name given as the J. C. Morse, and which I find corrected in the RECORD, by a Lake Superior correspondent. The purchase of a tug was made, the name of the craft in question being the Dave and Mose, which, sounded at a distance and with not the best of hearing faculties, might thus be construed. However, nobody was hurt and no blood shed.

John W. Moore, for several years past harbor master at this port, in conjunction with his duties as policeman, has been superseded in that office by W. H. O'Neill, also a policeman. Both, during their time, have been mariners on the lakes, and elsewhere. Unlike other lake ports, the office of harbor master here is under the jurisdiction of the board of police commissioners. Mr. Moore will in future serve as patrolman; at least such is the announcement in the papers.

An important sale of steamers took place yesterday morning at the Detroit Drydock Company's office, that of the Walter L. Frost, W. A. Haskell, and W. L. Averill, which were bid in by the above company for a trifle less than $100,000, although valued at $320,000. The Frost, like the others, was built by the drydock firm, and commissioned in 1883, and is 1,203 tons burden. The Haskell and Averill came out last year, and it is not beyond the truth to say that no finer or more substantial wooden vessels float on fresh water. The two latter are each 1,440 tons burden. They were constructed for the Chicago, Ogdensburg & Lake Champlain railroad company, who, through the dullness of the past season, were unable to meet their paper, due the Detroit Drydock, and, of course, had to succumb to the inevitable. The Frost and Averill are laid up at Chicago, the Haskell at Ogdensburg. There were no conspicuous vessel men present at the time of the sale, and the result was as above stated. No decision has as yet been determined on as to the future of these boats whether they will be resold or the company will run them on their own responsibility. The debt due the Detroit Drydock Company is stated as $306,950. There has been no other trafficking in vessel stock since my last communication.

John C. Goss, sailmaker, formerly Noble & Goss, was burned out on Saturday night through some unknown cause. His place of business was over H. D. Edward's shipchandlery, in the Pridgeon block. The damage sustained is at present unknown.

J. W. H.

BUFFALO.

Another of the indictments against Lorenzo Dimick is noticed for trial at the February term of the Over and Terminer.

[*Continued on 5th page.*]

MARITIME LAW.

COLLISION CASE—HENRY WALLACE, ET AL. VS. THE STEAMER SAGINAW VALLEY.

Reported for the Marine Record.

In the District Court of the United States for the Northern District of Ohio, Eastern Division.

Henry Wallace, et al., vs. Steamer Saginaw Valley. } In Admiralty.

The undersigned commissioner, to whom the above entitled cause was referred by the court, to take testimoney and report to the court the amount of damages sustained by said libelants, by reason of the collision in their libel set forth, submits the following report:

The undersigned has been attended by the proctors of the respective parties, by whom the testimony heretofore taken and remaining on file, was submitted for his consideration, no other testimony being offered by either of the parties; and after having read said testimony, heard the arguments of counsel, and duly considered the same, he finds therefrom as follows:

The result of the collision complained of was the springing of the main and monkey rails of libelant's vessel, and of the stringers bolted to her stanchions, and the breaking of her stanchions, eleven in number, at a point known as the "bluff of the bow," on the starboard side of the vessel. For the repair and restoration of the vessel it became necessary to unbolt and temporarily remove the main and monkey rails, the stringers, and probably the planksheer, in the vicinity of the fractured stanchions, so that they might be removed and new ones inserted in their stead; whereupon the temporarily removed rails, stringers and planksheer could be returned to their respective places and re-bolted. The work of repairing not having been done at the date of the taking of said testimony, for the cost thereof reliance upon the opinion of experts becomes a necessity; and on the part of those called as such to testify in this case a wide disagreement appears. With a sincere desire to harmonize these differences as far as possible, and to arrive at the truth, the testimony on this point has been carefully considered, and it is believed that the sum of $20 per stanchion would be required to be expended in labor and material to repair the injury done to libelant's vessel by said collision. For said eleven stanchions, therefore, the gross sum of $220 would be required.

The undersigned, therefore, finds and reports to the court that the amount of damages sustained by libelants, by reason of the collision aforesaid, is the sum of two hundred and twenty dollars.

Respectfully submitted,

EARL BILL, Commissioner.

AN AMATURE'S OPINICN SUSTAINED

Some twelve years ago Captain M. J. Kelly, of Racine, was marine editor of a local paper in Racine, and gave an opinion in regard to the collision of the schooners Willis and E. Jones. Below is given a communication from the captain, also the opinion, which has been confirmed by the supreme court and will be found interesting:

Following is the opinion of Captain Kelly, as it was printed in the Argus, of January 23, 1878:

"In reply to Mr. Robert Stay, or (Bob Stay,) will quote proposition: Two vessels approaching each other, A. and B. A. is steering E. by N. ½N; B. steering S.W. by W. ½W. A. sees B.'s green light two miles ahead, and B. did not see A.'s till 200 feet apart, then he (B.) sees A's two lights. A. starboards his helm, B. ported his; they collided, the wind south, veering to S. S. E. Who's to blame? Is not the rule of the route to port the helm? Statement—Wind S. by E.; A. steering E. by N. ½ N., has the wind free at five points, as allowed for a ship when close hauled, and counting the points on in nautical parlance. Boxing the compass—A. is going free, being eight and one half points off the wind; B. is steering S. W. by W. ½ W., and counting the points, B. is by the wind with the six points allowed and a half point to keep a good full. Now A. starboards his helm, which was right, and B. ports his, which was wrong; therefore B. was to blame for the collision.

An act fixing certain rules and regulations for preventing collisions on the water: ARTICLE 12. When two sailing ships are crossing so as to involve risk of collision, then, if they have the wind on different sides, the ship with the wind on the port side shall keep out of the way of the ship with the wind on the starboard side, except in the case in which the ship with the wind on the port side is close-hauled, and the other ship free, in which case the latter shall keep out of the way of the ship which is to leeward.

The rule of the road at sea is not generally understood yet, as it has been but a few years in operation on these waters. Some masters of vessels think they should port their helm always, which is not the case, while others are so heedless they don't care so that you get clear of him; but the fault of so many collisions is, as in this case, with the officer in charge of the deck on board of B. being under the impression to port the helm under all circumstances."

A LONG FIGHT IN THE COURTS OVER A MASTER'S INTEREST.

The case of Kelly vs. Bliss, recently argued before the supreme court of the State of Wisconsin, is the winding up of one of the longest marine suits that has ever been litigated on the western lakes. On the 30th of Nov., 1868, the brigantine Mechanic, 450 tons burden, laden with lumber, was approaching the harbor of Racine, and signalled for a tug. This was about noon. About 1:30 p. m. the tug Margaret took her in tow and towed her on to the bar at the mouth of Racine harbor, the result of which was the brig became a constructive total loss. The insurance had not expired over one hour when the vessel went ashore. The owner of the Mechanic sued the owners of the Margaret, and after litigation in the district and circuit court the case was finally decided in the supreme court at Washington, in 1877, in favor of the Mechanic, the owners, receiving her valuation at the time of loss. It appears from the record of the original case the master had purchased the one-sixth of the one-half, or the one-twelfth, of the original vessel and paid down the sum of $450, the balance to be paid out of the earnings of the vessel. After the loss the master was removed, the managing owner settling up and paying him his wages but sending him no account for receipts and disbursements. Finally, on bringing suit, the one-half owner promised the master that if the suit was successful against the tug they would reimburse him the money he had invested. After the decision and payment of judgment by the owners of the tug, the owner of the one-half that had sold to the master refused to reimburse him. Suit was brought in the circuit court of Milwaukee county, and from there to the supreme court at Madison, which last court, on the fifth trial, confirmed judgment to the plaintiff for the sum of $450 and interest.

COMMODORE.

GENERAL NEWS.

Representative Nichols has introduced a bill appropriating $50,000,000 for the establishment of a navy yard and depart of supplies at Brunswick, Ga.

The steamer Cheaspeake, of the Virginia oyster navy, captured seven schooners engaged in illegal dredging for oysters. The schooners and crews, sixty-eight men, were turned over to the sheriff. One schooner was brought to by a shot.

Congressman Price has succeeded in attaching an amendment to the river and harbor bill, allowing the admission of the appropriation of $12,500 for Superior harbor, so that half the amount will go to improve the mouth of St. Louis river.

An analysis of the salt taken from one deposit recently discovered in Ontario shows it to be of unusually good quality, a sample taken at the depth of 100 feet giving 92.65 parts of pure salt. The bed is claimed to be the deepest and purest on the American continent.

With regard to the seizure of Grinnell's sprinklers, there is no question of bad faith or any intention of defrauding the Canadian customs laws. The case involves the right of the Americans holding patents in Canada to construct in Canada their patented articles out of parts made and imported from the United States. The point is purely one of construction of the statutes, and is of great interest to American inventors.

Mr. James E. Simpson, of the firm of Simpson & Sons, contractors of the drydock at St. John's, N. B., says that St. John's has the largest drydock in the world. The dock is 600 feet on top, and 558 feet upon the line of keel blocking. Its breadth is 132 feet at widest part, and 85 feet at the abutment or entrance. It is built of wood, and its cost has been $550,000. The Messrs. Simpson have rented it from the Government for ten years at $5,000 per annum. The work commenced in June, 1883, and was, according to terms of contract, to have been finished on June 1, 1885, but instead was completed in December last, about six months within the specified time.

IN THE INTEREST OF NAVIGATION.

Special Correspondence of the Marine Record.

WASHINGTON, January 28.

BOARD OF SUPERVISING INSPECTORS.

The board of supervising inspectors of steam vessels, at its meeting on the 23d, adopted a rule allowing the use of steam syphons as a substitute for fire pumps on all steam vessels of 100 tons and under. Mr. Fehrenbatch of the Seventh District, submitted an amendment to the rule excluding passengers from the pilot-houses of steamers. The amendment provides that on western rivers passengers may be permitted to go into pilot-houses during daylight. He also offered an amendment to the rule adopted last winter, establishing code signals for steamers towing in foggy and thick weather. The amendment exempts steamers on western rivers from the operation of the rule. Steamboat-men on the northern and northwestern lakes asked for the adoption of this rule last winter, and when it was adopted supposed it applied to steamers on the lakes and seaboard only, but as it was given general application the proposition was submitted today to exempt western river steamers.

WORK OF THE LIGHTHOUSE BOARD.

The lighthouse board have made several important recomendations relative to the construction of lights in Michigan waters. They recommend that a light be placed off Peche Island in Lake St. Clair; this will be done as soon as it is decided whether the proposed locality is in American or Canadian waters. The board recomends $10,000 for a light on Pipe Island, near the mouth of the Sault river, also $12,000 for a system of range lights in the upper Sult river. These lights have become a matter of necessity in order to allow the passage of vessels through the Sault canal at night and they have the use of the canal for twenty-four hours each day instead of twelve as at present.

REQUIRMENTS OF THE SOO CANAL.

Duluth shipping renders necessary the improvement of the Sault Ste. Marie Canal. The increase of crops in Minnesota and the Northwest has made it necessary to begin at once to improve the lockage facilities of the Sault Ste. Marie Canal. General Newton, chief of engineers, in his last annual report said eight years would see the canal clogged. He now says the tonnage is increasing so that four years will see the canal taxed beyond its capacity. Cononel Poe's report, sent recently to the Speaker of the House, states that the registered tonnage passing through the canal during the season of 1884 was 2,997,887 tons, an increase of 955,578 tons, or nine times the average annual increase for the preceding fifteen years. This increase in 1884 is equal to the entire commerce through the canal during the first five years it was open to navigation. Colonel Poe says further: "The increase in registered tonnage was 47 per cent, in grain 87 per cent, in flour 82 per cent, and in iron ore 43 per cent. These are the great staples (although a notable increase in the lumber traffic was developed), and indicating the direction from which future increase must be expected. It will be principally from the cereal products of the Northwest, through the systems of railways terminating on Lake Superior. It is stated in the commercial colums of the newspapers that there are now stored at Duluth alone nearly 5,000.000 bushels of grain, and that this will be increased to more than 7,000,000 by the time navigation opens. If this be true (and I do not doubt it for a moment) the canal will be pushed toward its utmost during the spring of 1885." The river and harbor committee are still at work revamping their bill and the Sault Ste. Marie is one item of change that will receive full consideration.

Not a few members are dissatisfied with their woodchucks and are trying to get better treatment from the committee. It is not stated that any of the northwestern rivers and harbors are to be found in this aftermath of complaints

SUPERIOR AND ASHLAND HARBORS.

There is some chance that Ashland, Wis., will receive favorable mention in the river and harbor bill. It will be remembered that cold weather last fall cut off the intended survey and in consequence no recommendation could be made in regard to an appropriation. Colonel Barlow, the engineer in whose district Ashland harbor lies, has, however, written a communication to the speaker of the House reciting the facts in the case and stating north sea storms seriously interfere with the security of vessels while lying at the wharves. This sea originates in the bay, but may be argumented by the swell which passes around the point from Lake Superior. The construction of a jetty northeast of the town extending from the shore, four thousand feet or more into the bay, is desired to prevent this disturbance, and the necessity of certain other improvements being made during the coming season. This recommendation will be considered when the bill is taken up, and there is some confidence that it will result in a small appropriation. This new turn in Ashland's favor is the work of Congressman Stephenson. The friends of Superior are relying on action in the Senate to increase the appropriation for that harbor. The appropriation last year was $45,000 and $50 was asked for this year. The hope is to raise the $11,500 allowed by the committee under their 25 per cent rule to about $2,000. There is no doubt of a disagreement between the Senate and House over the river and harbor bill and a conference will necessarily result.

IMPORTS AND EXPORTS.

The total value of imports of merchandise for the twelve months ended December 31, 1884, $629.227.73; for the preceeding twelve months, $687,066,216; a decrease of $57,838,486. The values of exports of merchandise for the twelve months ended December 31, 1884, were $749,303,802; for the preceeding twelve months, $895,209.316; decrease, $45,905,514. The excess of the value of exports over imports of merchandise for the twelve months ended Decembre 31, 1884, was $120,076,072.

GALVESTON HARBOR.

Captain Eads has proposed that for the sum of $9,000,000 he will guarantee a depth of 30 feet and not less than 26 feet in any part of Galveston harbor, which is troubled with sand bars, the payments to be made in instalments as the work progresses and its success is assured. He proposes to deepen the channel by means of the jetty system, which proved so successful at the mouth of the Mississippi. The army engineers are very much opposed to the jetties, and while confessing that in the instance of the Mississippi river the system proved successful, personal pride keeps the engineers from expressing an opinion favorable to Captain Eads. The committee decided that the jetty system is the best, and has sought to compromise with Captain Eads by making a proposition that the government do the work, and employ him to supervise, he to receive therefor an annual salary of $5,000.

E.

STEAM FERRY TO THE FORT.

Messrs. Thomas Marks & Co. have entered into a contract with the John Doty Engine Co., of Toronto, for the building of a steam ferry to be used as a passenger boat between Port Arthur and the Kaministiquia. The boiler and engines to be constructed by the Dotys, and the hull by the well known shipbuilder Melancthon Simpson. The boat is to be 75 feet long, 16½ feet beam on deck and 15½ feet at water line, 7 feet deep, built throughout of the best quality of white oak, and finished to suit the trade for which she is intended.

The boiler is to be steel adapted to burn hard coal, and both it and the engine are larger than usually put in a boat of this size. This, coupled with the fact that the lines are unusually fine, (being modeled for speed rather than capacity) makes the builders talk of 16 miles an hour. However, less than 16 miles, will in all probability, show a clean pair of heels to any of Port Arthur's local fleet.

We understand that is the intention of Messrs. Marks to run the boat on schedule time between here and the Town Plot. The number of trips per day will not be definitely decided until the traffic can be better estimated than at present, but will be at least four trips each way. The first trip in the morning and the last trip at night will be so arranged that men employed on the C. P. R. works at Fort William can live at Port Arthur, and reach their work at 7 a. m. and

be able to leave sharp at 6 p. m. returning. Extremely low rates of fare will be inaugurated to meet the requirements of those who travel often.

Kakabeka is in all probability the name under which the new boat will sail, and it seems quite appropriated, that the first boat ever specially built for a Port Arthur firm should be known by the name of a cataract which is now more than locally famous, and the one prominent point of interest not only of the river which the steamer is to ply but in the whole of our district, which if it be famous for one thing more than another it is for the majestic grandeur of the scenery.—*Port Arthur Sentinel.*

FRANKFORT MARINE REVIEW FOR 1884.

Special to the Marine Record.

FRANKFORT, January 25.

January 19.—Propellers Geo. D. Sanford makes a round trip to Manistee.

January 23.—Tug Hall tries to leave the harbor but is prevented by slush ice that reached bottom, the channel between the piers is choked up.

February 1.—Lake Michigan covered with drift ice as far as the eye can reach.

March 18—No water to be seen from Frankfort on Lake Michigan; the drift extends far beyond the horizon.

March 13.—Captain of steamer Sanford experimented to blast a passage in the harbor but failed. Tugs Ross and Hall got up steam and broke, ice; the Hall had a hole punched in her bow. Tug Shirley Butler launched.

March 20.—Propeller Sanford makes her first spring trip to Manistee.

March 30.—Propeller City of Ludington is the first arrival from the outside world.

March 31.—Steambarge Geo. Burnham and C. Starkee the first to seek shelter.

April 10.—Schooner Geo. W. Wescott the first sail departure for Milwaukee.

April 11.—Propeller T. M. Weston and Lew A. Cummings resume the shore route.

April 12.—Scow Nellie Church the first sail arrival.

April 16.—Captain Matthews resumes charge of Point Betsy life saving station.

March 17.—Propeller Lawrence arrived, making the run from Manitowoc, 85 miles, in seven hours and thirty minutes.

April 22.—Propeller Lawrence returns; could not break through the ice gorge in the straits.

April 25.—Steambarge Mary Mills, the first craft through the straits, passes with all her colors flying.

May 2.—Schooner Hope of Charlevoix run ashore on Point Betsy; rescued by life saving crew and tug Hall.

June.—U. S. revenue cutter Andrew Johnson in port; also the British schooner Sylvester Neelon, flying the English flag.

July 10.—Tug D. P. Hall pulls the schooner Geo. Barber off the beach at Good Harbor.

July 22.—Terrific squall and rain storm passes over Frankfort 6 p. m.

July 26.—Tug L. Q. Rawson, having received a rebuild at Manistee, returns to Frankfort.

August 12.—Captain Kirkland and Shantee Morgan in tow. K. takes the job to raise engine and boilers on sunken propeller City of Boston.

August 26.—Sloop Clara arrived minus topmast and rudder, which were lost in a gale.

September 18.—Scow Minnehaha leaves port without clearing at the custom house. The officer sends the tug Hall in chase and brought the captain back to arrange matters.

Sept. 19.—Scow Dan Maybee [formerly I. M. Hill] unships her rudder but makes port all right.

September 30.—The wrecking schooner Experiment came in having on board some nails recovered from wreck of schooner John B. Wright sunk on Lake Michigan in 1854; over one thousand kegs recovered.

Oct. 5.—The steward of the steamer Sanford falls overboard in the harbor and is drowned.

Oct. 9.—Lieutenant Rogers inspects Point Betsy life station.

Oct. 20.—Steambarge J. R. Whiting and barge Guiding Star, are disabled; came in to repair damages.

Nov. 7.—Steambarge Gratwick and consort depart on their last trip. They carried 19,000,000 feet of lumber this season.

Nov. 25.—Propeller Lawrence, scow Dan Hayes, and tug Lew Wallace sheltered. Ice forming in Betsy Lake. Schooners Una and George Wescott lay up.

Nov. 28.—Captain Waters lays the keel of a new tug.

Dec. 6.—A vessel bound south passes this noon, the last one seen.

Dec. 7.—Point Betsy light closed.

Dec. 12.—South Manitou Island light closed.

Dec. 14.—Frankfort pierhead light closed.

Dec. 26.—Propeller Weston arrives from Manistee and departs, the last of the season. The following craft are laid up here: Tugs Ruby, D. P. Hall, Sharley Butler, Jay, Jessie slytield; Propeller Sanford; schooners Geo. W. Wescott and Una; scow First Degree, and Woodward's pile driver. C.B.

Thomas Neilan, of Scottsville, is shipping 1,000,000 feet of logs from Tallmon to Ludington, by rail, for the Pere Marquette Company, loading about 25,000 feet per day.

Subscribe for the MARINE RECORD.

Alderman Cullerton offered the following in Chicago council, last week, which was referred to the committee on wharves and public grounds:

WHEREAS, Owing to the crowded state of our harbor, and the rapid increase of tonnage on our lakes, the necessity for more harbor room is apparent, and

WHEREAS, Owing to the suit now pending in the United States Court between the State of Illinois and the Illinois Central Railroad Company for the possession of the submerged land in the outer harbor, the State of Illinois and the Illinois Central Railroad Company, and the City of Chicago are debarred from improving said outer harbor until the final decree of the courts in the case; and

WHEREAS, Owing to the magnitude and financial importance of said case, many years may elapse before a final decree is rendered, thereby preventing the city from the use of said outer harbor and forcing commerce to seek other locations; therefore, be it

Resolved, That this council, being desirous of bringing the lake front question to a close, and thereby facilitating the speedy completion of the wharves, docks, and slips in said outer harbor, do instruct the mayor and comptroller to communicate with the State authorities, and request the said State authorities, at as early a date as practicable, to open negotiations with the Illinois Central Railroad Company for a compromise of the suit now pending, and that said State authorities make a proposition to said Illinois Central Railroad Company, based on the plan recently submitted to this council by Alderman Cullerton, the same being satisfactory to this council, and eminently just for both parties And be it also

Resolved, That our representatives in Congress be instructed to cause House bill No. 260, reported back to the sub-committee of the judiciary, be delayed until this council is ready to recommend amendments to the same, in order that the entire lake front question be settled in one bill.

The schooner Harvey Bissell presents a peculiar appearance where she lies near the mouth of the Carp river. The ice, which moved in and out of the bay, is doing an amount of damage to her that can only be calculated in the spring. It would have paid the owners or the insurance pool to have accepted Murphy's proposition, when he offered to take her off the shore for $4,000. Next spring, the damage she is receiving in the above described manner, will more than reach that amount, if, indeed, the boat has not become a total wreck.—*Marquette Mining Journal.*

Captain Chris Baker went to Daneville on Saturday last and so soon as his health is sufficiently restored he will take a journey down south to enable him to get strong enough for next season's sailing.

The cut of the mills of Ogemaw county in 1884 was: Lumber, 18,600,000 feet; shingles, 5,577,900; lath, 4,100,000; hardwood lumber, 9,383 feet.

The St. Clair lumber company of Detroit has increased its capital stock from $50,000 to $100,000.

For Sale or Exchange,

Tug Annie Robertson.

Her length over all is 51 feet, breadth 13 feet and depth of hold 6 feet; draws 5½ feet of water; measures 9 24-100 (new) tons. and 18 24-100 old. Built in 1880 and rebuilt this spring, new deck frames and cabin, and machinery thoroughly overhauled. Engine is 14x14, boiler 8½ feet long and 4 8-12 in diameter and allowed 95 pounds of steam Warranted in No. 1 condition and subject to inspection, Price, $3,300 cash. Inquire at MARINE RECORD OFFICE.

FOR SALE,

A Fine Harbor Tug.

Dimensions of hull 65 feet over all, 16 feet beam, 8 feet hold; and measures 46 tons with 7 feet draft; can be made 6 feet draft. The engine, 18x20, is in first-class condition, with all new brasses, new rings in cylinder and turns a six-foot wheel, which was new last season. The boiler is one year old, is large enough to burn wood or coal and is allowed 100 pounds of steam. Price $4,500, and must be sold inside of thirty days. Address MARINE RECORD OFFICE.

DAVID BARNHISEL, Agent.

DOMESTIC & STEAM COAL

Cleveland, Ohio

BUTTS COAL CO.,

[LIMITED.]

Only Miners of

BUTTS CANNEL COAL,

and dealers in Gas Coals, Nut Coals, and Steam Coal for Tugs, Barges, etc.

CLARK I. BUTTS,

CLEVELAND, O. General Manager.

J. A. OSBORNE,

Attorney, Proctor & Advocate,

ROOM 6, 190 SUPERIOR ST.,

CLEVELAND, OHIO.

ROBERT RAE,

Admiralty and Insurance Law Office,

Room 37, Merchants' building, CHICAGO, ILL.

THOS. WILSON

MANAGING OWNER

Wilson's Transit Line.

Gen. Forwarder. Freight and Vessel Agent.

CLEVELAND, O.

PALMER & BENHAM,

Vessel Owners & Agents,

New Bank Building, corner of Superior and Bank Street, Cleveland, Ohio.

MOORE and BARTOW,

Ship Brokers and Agents,

No. 101 St. Clair Street, Room 27.
CLEVELAND, - OHIO.

CAPT. D. M. BECKER. CAPT. HENRY BROCK

D. M. BECKER & CO.,

Commercial Brokers and Vessel Agents,

Vessels chartered, purchased and sold; contracts made for coarse and heavy freights.
Lake Superior and Escanaba iron ore charters for single trip or season a specialty.

Office, 130 Water St. Room 14. Coal & Iron Ex. Build'g. Telephone No. 953. Cleveland, O.

H. J. WEBB & CO.,

Ship Brokers, Vessel Owners and Agents.

[ESTABLISHED IN 1856.]

H. J. WEBB & Co., will charter Vessels for Lake Trade. Special attention given to Chartering Vessels in the Lake Superior Iron Ore Trade, both for the season and single trip.

ARCADE BUILDING, 101 ST. CLAIR ST., Cleveland, Ohio.

TELEPHONE { Office, No. 338. Residence, No. 1328.

SCOTT & BERRIMAN.

Fire and Marine Insurance Agents and Vessel Brokers.

Attention also given to the purchase and sale of Iron Ore, Telephone, No. 18.
Office, 130 South Water-St., Cleveland, O.

ALEX McDOUGALL,

VESSEL AGENT AND BROKER,

DULUTH.

Owners and masters of vessels wishing to get cargoes of grain from this port will do well to confer with me. Will be glad to furnish information in regard to cargoes, also in relation to docks, depth of water, etc., at **Duluth, Agate Bay** (new iron ore port), **Port Arthur, Washburn, Ashland,** and all points near the west end of Lake Superior. Good gangs of men furnished on short notice for trimming cargoes of grain, loading and unloading all kinds of freight.

JAMES T. ROSE,

Vessel Agent and Broker,

BOX 1616, DULUTH, MINN.

Late Gen. Ag't for Collingwood Line of Steamers
Special Attention Paid to Chartering Vessels.

A. M. BARNUM,

Vessel Agent and Broker,

15 Exchange St. Buffalo, N. Y.

☞IF YOU DO NOT RECEIVE MY MONTHLY LIST OF VESSELS FOR SALE, SEND FOR IT

BEE LINE

CLEVELAND, COLUMBUS, CINCINNATI & INDIANAPOLIS.

Commencing Sunday, November 23, 1884, trains of the Bee Line—Cleveland, Columbus, Cincinnati & Indianapolis Railway—will leave and arrive at Cleveland as follows, CENTRAL STANDARD TIME, 33 minutes slower than Cleveland time:

	Depart
No. 3, Columbus, Cincinnati & Ind Ex.....	9:00 A M
No. 23, Galion & Wheeling Express.....	6:50 A M
No. 9, Col., Cin., Ind & St. Louis Ex.....	°6:50 P M
No. 5, Col. Cin., Ind. & St. Louis Express...	°12 25 P M
No. 27, Galion & C.L & W. Acc.....	3:30 P M
No. 29, Massillon & Ulrichsville Ex.....	4.30 P M
	Arrive.
No. 8, Col, Cin, Ind. & St. Louis Exp.....	°6:40 A M
No. 20, Uhricsville & Massillon Ex.....	8:55 A M
No. 2, Col. Cin. & Indianapolis Express.....	9:50 P M
No. 14, St. Louis, Ind.. Cin. & Col. Ex.....	°4:45 P M
No. 22, Galion Acc.....	9:20 A M
No. 26, Wheeling Accom	4:15 P M
No. 4, Col., Cin. & N. Y. Express.....	1045 A M

Trains marked ° daily, all other trains daily except Sunday

E. B. THOMAS, General Manager. O. B. SKINNER, Traffic Manager.

A. J. SMITH, General Passenger Agent.

CLEVELAND, OHIO.

LAKE SHORE & MICHIGAN SOUTHERN.

Commencing Sunday, May 11, 1884, at 12 o'clock noon the time given in the figures below is the new standard (Ninetieth meridian) time, which is thirty-three minutes slower than Cleveland time proper.

Eastward.	Arrive	Depart.
No 4, Fast Limited Express.....	°1 10 A M	°1 25 A M
No 8, N Y, B & A Express.....	°6 35 A M	°7 00 A M
No 26, Elyria Accommodation.....	†8 05 A M	.....
No 35, Buffalo Ac'm via Sandusky	†10 35 A M	†10 50 A M
No 35, Toledo Accom via Norwalk	†10 35 A M	†10 50 A M
No 12, N Y & B Fast Express.....	°1 55 P M	°2 25 P M
No 14, Special N Y & Bos Express	.....	5 00 P M
No 2, Night Ex via Norwalk.....	9 40 P M	†10 00 P M
No 22, Night Ex via Sandusky..	†9 42 P M	.....
No 26, Conneaut Accommodation	†4 25 P M	.....

Westward.	Arrive.	Depart.
No 1, Fast Limited Express.....	°11 55 A M	°12 05 A M
No 23, Mich Express via Sandusky	°2 15 A M	°2 35 A M
No 3, Chicago Express via " ..	°6 05 A M	6 30 A M
No 25, Mich Accom Norwalk.....	.....	†6 10 A M
No 21, Toledo Ex via Norwalk...	†12 50 P M	†3 20 P M
No 5, St Louis Ex via Sandusky..	†12 05 P M	12 50 P M
No 9, Chi Exc Fx via Norwalk.....	°6 10 P M	°6 40 P M
No 31, Elyria ac to Elyria only...	.....	†4 30 P M
No 27, Conneaut Accommodation	†8 10 A M	.....

Sunday train for Nottingham—Depart 8:30 a. m, and 1:45 p. m.; returning, leave Nottingham at 9:05 a. m, and 3:45 p. m.

Reference marks—° Daily, † daily, except Sunday, ‡ daily, except Monday.

For full information as to trains and connections apply at the new city ticket office, corner Seneca and St. Clair streets, Lake Shore block.

The Nickel Plate!

NEW YORK, CHICAGO & ST. LOUIS RAILWAY.

The passenger equipment of this New Trunk Line is all new and is supplied with the latest appliances necessary to safe, speedy and comfortable travel.

Trains leave and arrive at the Union Depot, Van Buren street, Chicago, and N Y, L E & W R'y depot at Buffalo.

Following is the time in effect Oct. 6, 1884, and until further notice:

GOING EAST.	LV.	AR.	GOING WEST.
			P. M.
.....	..... Chicago		7 50 .....
.....	9 45 ..... Valparaiso		5 42 .....
	P. M.		
.....	1 50 ..... Fort Wayne		1 50 .....
.....	2 05 ..... New Haven		1 35 .....
			A. M.
.....	3 56 ..... Leipsic		11 30 .....
.....	4 49 ..... Arcadia		10 34 .....
A. M.			P. M.
6 50	5 00 ..... Fostoria		10 22 8 50
7 35	5 45 ..... Green Springs.		9 44 8 05
8 15	6 20 ..... Bellevue		9 10 7 35
10 49	9 02	AR. ..... Cleveland ..... Lv.	6 45 5 01
P. M.			
12 05	..... Painesville		..... 3 44
12 58	..... Ashtabula		..... 2 51
1 42	..... Conneaut		..... 2 20
2 41	..... Erie		..... 1 23
			A. M.
4 19	..... Dunkirk		..... 11 24
			A. M.
5 55		AR. ..... Buffalo ..... Lv.	..... 9 50

Through tickets to all points are on sale at principal offices of the company at LOWEST RATES for any class of tickets desired. Baggage checked to destination

For information, call on nearest agent of the Company, or address B. F. HORNER, Gen'l Passenger Agent,

LEWIS WILLIAMS, General Manager. Cleveland, O.

New York, Pennsylvania & Ohio R. R.

NEW YORK, BOSTON AND THE EAST.

Central or Ninetieth Meridien time, 33 minutes slower than Cleveland city time.

Until further notice trains will leave from the new Central Depot, South Water street and Viaduct as follows:

7.20 a. m. ATLANTIC EXPRESS—(Daily) Pullman sleeping and hotel coaches from Leavittsburgh 9:10 a. m. to New York, Albany and Boston without change. Arrive at Meadville at 11:25 a. m. (dinner) Franklin at 12:08 p. m, Oil City 12:30 p. m, Corry 1.14 p. m, Jamestown (Lake Chautauqua) 2.12 p. m, Buffalo 5:50 p. m. Rochester 8:20 p. m.; Hornellsville 6:00 p. m. [supper]; Corning 7:25 p. m. Elmira 8:05 p. m. Binghanton 10:05 p. m., Albany 5:00 a. m. Boston 2:05 p. m.; arriving at New York 6:15 a.m.

7:20 a. m. PITTSBURGH EXPRESS — Daily — Through without change. Arrives at Youngstown 9..55 a. m., Sharon 10:55 a. m., Sharpsville 11:05 a. m., Pittsburgh 12 45 p m.

2:30 p. m. LIMITED EXPRESS—Through Pullman sleeping coach from Cleveland to New York. Arrives at Meadville at 6:30 p. m, Jamestown 8:47 p. m., Salamanca 9:45 p. m., New York 10:25 a. m.

2:30 p. m. PITTSBURGH, WASHINGTON AND BALTIMORE EXPRESS—Daily—Thro without change. Arrives at Youngstown 5:00 p m., Pittsburg 8:00p. m., Washington 7:09 a. m., Baltimore at 8:19 a. m.

4:00 p. m. MAHONING AOMMODATION — Stopping at all way stations, arriving at Youngstown 6:55 p. m., Sharon 7:50 p. m., Sharpsville 8:00 p. m. Daily except Sunday.

11:00 p. m. NIGHT EXPRESS—(Daily except Sunday) Seeping coach from Cleveland to Hornellsville. Arrive at Meadville 3:25 a. m., Corry 4:59 a. m. Jamestown 5,57 a m, Salamanca at 7.10 a. m., Buffalo 9:20 a. m., Niagara Falls 11.50 a m., Rochester 12:58 p. m., Hornellsville, 11:00 a m., Corning 12:07 p. m, Elmira 12:40 p. m., Binghampton 2:19 p m., New York 9:10 p. m.

11 00 p. m. PITTSBURGH, WASHINGTON AND BALTIMORE EXPRESS — Wagner Sleeping Coach, Cleveland to Pittsburg without change Arrive at Youngstown at 2:00 a. m., Pittsburgh 5:55 a. m., Washington at 7.30 p m, Baltimore at 8 30 p m.

Trains arrive at Cleveland, 6:20 a. m., 10:08 p. m., 12:50 p. m., and 6.15 p. m.

☞This is the only route by which passengers can reach Corry Elmira, Binghampton, New York City and intermediate points without change. No change to Boston and New England Cities.

Baggage checked through to all points East

Through tickets and information regarding the route can be obtained at the office 131 Bank street, and at new Depot of N. Y., P & O R R., South Water street and Viaduct, Cleveland, O.

A. E. CLARK, Gen'l Pass'r Ag't Cleveland, O.
J. M FERRIS, Gen'l Man'gr, Cleveland, O.
M. L. FOUTS, Passenger Agt, 131 Bank St. Cleveland.

WIN more money than at anything else by taking an agency for the best selling book out. Beginners succeed grandly. None fail. Terms free. HALLETT BOOK CO., Portland, Maine.

200,000 *in presents given away.* Send us 5 cents postage, and by mail you will get *free* a package of goods, of large value, that will start you in work that will at once bring you in money faster than anything else in America. All about the $200,000 in presents with each box. Agents wanted everywhere, of either sex, of all ages, for all the time, or spare time only, to work for us at their own homes. Fortunes for all workers absolutely assured. Don't delay. H. HALLETT & Co., Portland, Maine.

The Marine Record.

Published Every Thursday at 144 Superior Street, [Leader Building.]

A. A. POMEROY, Editor and Proprietor.

TERMS OF SUBSCRIPTION:

One year, postage paid.....$2.00
Six months, postage paid..... 1.00
Invariably in advance.

Subscriptions will be continued until ordered stopped by a written order, or at the publication office.

The MARINE RECORD can be found for sale by the following news dealers.:

CLEVELAND, OHIO—G F Bowman, corner of Pearl and Detroit, streets.

CHICAGO, ILL.—Joseph Gray, No. 9 West Randolph street.

BUFFALO, N. Y.—C. Rohmer, Michigan stree Swing Bridge.

DULUTH, MINN.—C. F. Johnson, 117 West Superior street.

ESCANABA, MICH.—William Godley.

MANISTEE, MICH.—J. E. Somerville.

Articles, letters and queries on all subjects are solicited.

ADVERTISING RATES.

Ten cents per line, nonpareil measurement, or $1.20 per inch, each insertion; four weeks $4.00; with a liberal discount on orders amounting to $40.00 or over.

All checks and drafts should be drawn to the order of A. A. Pomeroy.

Entered at the Post Office at Cleveland as second-class mail matter.

CLEVELAND, OHIO, THURSDAY, FEBRUARY 5.

LAKE MICHIGAN AND DETROIT RIVER SHIP CANAL.

Representative Atkins, of Pennsylvania, has reported favorably from the House sub-committee on railways and canals, Representative Lacey's bill to provide for the survey of a water route to connect the waters of Lake Michigan with the Detroit river. The bill provides that for the purpose of making a survey to ascertain the practicability and cost of the construction of a water route for transportation, from some suitable point on the eastern shore of Lake Michigan to some suitable point on the Detroit river, connecting the waters of the upper and lower lakes, the sum of $10,000 is appropriated out of moneys in the treasury, to be expended under the supervision of the Secretary of War.

The "water route," of course, means a ship canal across the State of Michigan. The length of the canal would be about 178 miles. The canal would shorten the voyage, for all such vessels as could navigate it, between the lower lake ports and Chicago or Milwaukee, about 550 miles; or, as between Chicago and Buffalo, about one-half the distance. The season of navigation would also be prolonged, as between the upper and lower lakes, by at least thirty days, a portion of which gain would be in the spring, and a portion in the autumn or early winter months, and would be a gain of at least fifteen per cent on the open period of navigation.

As to steam vessels, an average of two days' time would be saved on the voyage each way, making a saving on the season's work of, say sixty days. As to sailing vessels, the difference in their favor would be much greater; but confining the comparison to steam vessels and their tows, the advantages of the ship canal would be, in the two ways indicated, equivalent to an addition of ninety days to the time of open navigation, or an addition of nearly, or quite, fifty per cent, and increase the number of voyages or trips in that proportion. The value of this can not be even approximately estimated, but if the ship canal were to be of sufficient capacity to float vessels freighted with 50,000 bushels of wheat or corn, the added value to commerce would be immensely in excess of the expenditure, which would not exceed $4,125,000. The late navigation of the upper lakes is always hazardous, and it is estimated that loss by storm and wreck between Chicago and Detroit river has, for twenty-five years past, been more than $1,000,000 annually. The operation of the canal would undoubtedly diminish this by one-half, which would of itself be equivalent to the interest on the cost of the canal, and the expense of its conduct and administration. There has never been an official or governmental survey of the proposed route, but it has been carefully examined by private parties, of experience in railway and canal engineering, and the aspect of the country through which the projected route would pass is of a comparatively level and even character, abundantly supplied with water in running streams, and bordered along a large part of the way by deep, never-failing little lakes, of from two to ten miles in circumference, and to the number 300, or more. A considerable portion of these lie above the summit level of the proposed canal, and an abundant supply for a ship canal of the largest capacity is, therefore, undoubted.

As long as the Dominion of Canada is an appendage of Great Britain, the necessity of the canal is apparent, as a military route. Its inland character and the saving of time and distance in the transportation of gunboats, men-of-war, and heavy ordnance, would seem to make it a military necessity, in case of war with Great Britain.

There is a vast agricultural area beyond the western terminus of the canal. There are five states in the northwest whose products would be tributary to the proposed canal, whose united crop of cereals is now materially in excess of the whole crop of the United States twenty five years ago, and the rapidly increasing production of provisions and live stock for transportation, and other heavy freights to move, are in still greater proportion. The necessities for transportation increase faster than those facilities are furnished, and invite the attention of the government to all feasible improvements and the opening of new water-courses.

HARBORS AND RIVERS.

Perhaps the most efficient and economical branch of the United States army at the present time is the corps of engineers. When it is considered that the officers of the corps have, by long years of application, fitted themselves for their duties, and have learned to accurately reduce cause to effect in everything that pertains to their practice, it is not clear why the work done by them in Galveston harbor, upon which about one million dollars have been expended, with the results foreseen by the officers in charge, should now be pronounced of no avail and abandoned, and a new and questionable theory taken up which will involve the expenditure of an immense amount of treasure, to the detriment of much needed improvements on the northern lakes and rivers. By referring to our Washington letter in another column it will be seen that our whole system of lake navigation will suffer by this rider to the appropriation bill; that the requirements of the lakes, so justly estimated by the engineer in charge of each district, have been curtailed and cut down seventy-five, and in some cases one hundred, per cent, in order that these Galveston harbor and Lower Mississipi river schemers may be accommodated with ten millions of dollars. We do not claim much consideration for the Hennepin canal project, thinking that the millions which would be expended in its construction could be much better applied in improving existing works and in the purchase of the Portage Lake ship canals. The purchase and improvement of this latter work would be of great commercial importance. The business of the canal for the season of 1884, is detailed in the following figures, compiled by the Houghton Mining Gazette:

UPPER SHIP CANAL.

	No.	Tons
Steamers (passed)	476	350,016
Vessels (passed)	53	15,362
Total		365,378
Increase over 1883		52,993

LOWER SHIP CANAL.

	No.	Tons.
Steamers (passed)	531	371,397
Vessels (passed)	231	85,836
Total		457,233

Among the important items that passed in and out of the canals last year were:

	Tons.
Coal	85,000
General merchandise, etc	30,000
Refined copper	22,572
Mineral	8,625
Lumber (feet)	4,000,000

Had these canals been free of tolls and carrying the same depth of water as the Sault canal, the tonnage passing through them last year would have been at least 30 per cent greater than the figures show; as it was, the amount is nearly half that of the tonnage of the Sault canal in 1883, which commands the entire commerce of Lake Superior. With the above named heavy loads to carry, Galveston harbor, the Lower Mississippi and Hennepin canal, it will not be surprising if the appropriation bill is long delayed, and as a matter of compromise, much of that which is good be stricken out in order to remove a portion of that which is unnecessary.

INTER-STATE COMMERCE.

Editor of the Marine Record.

CLEVELAND, O., February 2.

DEAR SIR:—Your editorial of January 22d, in regard to railroad monopolies, discrimination in rates, rebates, etc., is all right as far as it goes, but how are we to prevent it? It is only too true, what Mr. Van Wyck said in his speech in the Senate, that there was too much of this laying down one dollar and taking up three. It has always been so, and it always will be, unless the people take the matter in hand, and I think now is the time to do so. Since the Senate has refused to pass the Reagan bill, it shows plainly that the only legislation that can be had on the subject of inter-state commerce is in the interest of the railroads, (or those who replace the one dollar with three,) and against the shipper and producer. It is true, as you say, the drydock association approved the Reagan bill. That is all they did, however. It seems to me that will not help the matter any. What it wants is for some organized body, one that will make itself heard all over the land, to take up the subject. Therefore, I would suggest that, as the vessel owners get squeezed, about as often and quite as hard as anybody by the railroads when they see fit to charge more for a short than a long haul, and as they are the only organized body of interested men, that they call a meeting, and there select a good, influential man, who has the time to educate himself on this subject, and devote his whole attention to the measure, and to receive a good salary, raised at first by the vessel owners paying into the treasury for that purpose the necessary sum per ton, (which, considering the enormous tonnage of the lakes, would be a mere nominal sum.) This agent can then make it his business to keep the subject before the public and to get the manufacturer, meechant and farmer interested, so that at some time in the future men can be sent to our legislative halls who can not be bought. I suppose you think such a man would be a living curiosity. I don't. There are men willing to be sent to Congress who would conscientiously work for the best interests of the greatest number, and they could be elected if the tax payers and business men would only attend the caucuses and not let the ward bummer arrange their tickets for them, when they go to vote. Hoping to hear from you again on the subject, I remain

Yours truly, J. F. P.

The above communication, from a vessel owner, contains many salient points, which are of sufficient importance to our lake transportation interests as to warrant the close attention of our largest vessel owners, who are invited to use these columns for their discussion, which will, perhaps, suggest some means of reform. If the mode suggested in the letter referred to can be bettered it should be made known. It is a well known fact that there are now in the Senate of the United States at least eight railroad Senators, whose specific object is to advance the interests of trunk lines, and their influence must be combatted in a vigorous and aggressive manner. This through rate business of the railroads does not concern the intermediate ports and cities alone, but also the young and prosperous city at the head of navigation, Duluth, If the trunk lines can make their through rates low enough to attract the immense quantity of grain now seeking shipment at Duluth, hoping to make themselves good by high local rates from the cities midway to the seaboard, they will do so, and Duluth and other far west shipping ports will suffer by the discrimination, and consequently the lake carriers. We would be pleased if the secretary of the Duluth Chamber of Commerce, which has recently compiled an exhaustive statistical article on the receipts and shipments of grain, etc., at that port, for the use of the Minnesota commissioner of railroads, and other lake men there would advance their views in this regard, they being at the seat of war and in a position to be well posted respecting the tendencies of the evil.

DOUBLE SIDE LIGHTS.

In connection with an article on this subject last week, we lay before the reader the text of the bill referred to, as follows:

"Be it enacted, etc., That on and after January 1, 1886, all sail vessels under way in the inland and lake waters shall carry on the starboard side two green lights, the forward green light of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least two miles, and so constructed as to show a uniform and unbroken light over an arc of the horizon of ten points of the compass, and so fixed as to throw the light from right ahead to two points abaft the beam on the starboard side; the second or auxiliary green light to be placed twelve feet abaft and six feet above the forward green light, as to show distinctly at a distance of at least two miles, and so constructed by outboard screens as to show a uniform and unbroken light over an arc of the horizon of eight points of the compass, and so fixed as to throw the light from two points on the starboard bow to two points abaft the beam on the starboard side. And on the port side two red lights, the forward red light of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least two miles, and so constructed as to show a uniform and unbroken light over an arc of the horizon of ten points of the compass, and so fixed as to throw the light from right ahead to two points abaft the beam on the port side; the second or auxiliary red light to be placed twelve feet abaft and six feet above the forward red light, and as to show distinctly at a distance of at least two miles, and so constructed by outboard screens as to show a uniform and unbroken light over an arc of the horizon of eight points of the compass, and so fixed as to throw the light from two points on the port bow to two points abaft the beam on the port side."

It will therefore, be seen that our correspondent, writing from Chicago last week, was correct in his inference. The measure as set forth in the above extract would ingurate a system of confusing lights, without a single redeeming feature and should not, under any circumstance, be experimented with on the lakes, when so many vessels are continually coming into close proximity to each other. Let our own lake shore Congressmen spend some time in examining our present system of lights, find the cause of the existing evils, which were generally covered in these columes last week, and go into meeting primed to defeat the above new measure and correct the evils of the old system by insisting on the rigid enforcement of its proivisions.

ST. CLAIR FLATS CHANNEL.

There appears to be some difference of opinion in the committee on rivers and harbors regarding the proper name by which to designate the improvement at the St. Clair Flats. On Colonel Poe's recommendation, an amendment has been added to the river and harbor bill appropriating $183,000 for the improvement of the channel, to prevent silt from being deposited by the current at the mouth, which all lake men know has been a prolific source of delay and loss to lake commerce, at one time no less than forty craft being blockaded at that point from this cause. We have in years gone by heard of the "raging canal," but do not remember to have noticed that the current was sufficiently strong to tear up the bed. It would therefore seem that the improvement of a channel by the sinking of piles to prevent its filling up cannot be designated a canal. The opposition in the committee room is based on a technical question that money to be spent in improving a canal can not be provided for in a harbor and river appropriation bill. It would be well if these technical gentlemen would take exception to some of the other items in the bill whereby their reputation for having a little common sense would not be jeapardized.

"THE NEEDLES EYE."

A correspondent in the Ogdensburg News writes as follows: "In a recent issue I notice an article in reference to the removal of the rock called Needles Eye, in the Brockville narrows, St. Lawrence river. I fully concur in the opinion of S———s in regard to the same matter, and having for the last thirty years run vessels and steamers through that passage both day and night, have always been under the impression that somebody must have been at fault, in not having provided for the removal of such an

'insignificant, but 'dangerous thing' as the shoal referred to.

The Canadians have a scow called the Torpedo fitted for sub-marine blasting, which is employed during the summer season in removing rocks in the Galoups Rapids, to a useless purpose; that same scow would at a very little expense scatter the whole rock, by drilling a few holes and inserting a little dynamite which could not be more beneficially used than in this case

We are living in a progressive age, when all possible conveneences and comforts for the benefit of mankind can be obtained through modern agencies, and corporations extensively engaged in forwarding and transportation business by that water route, employing steamers and vessels of different kinds, ought to use all possible influence in the matter, even if they had to do it themselves should the Government refuse to be at the expense of removal. The cost would be a mere bagatelle in proportion to the benefit steamers and vessels would derive therefrom; the blasting once done and sufficient water secured, no dredging to remove the stone would be necessary, the water being over one hundred and twenty feet deep all around the rock. We hope that some interested party will make a move in the right direction for the removal of the said obstruction."

The Kingston News says, The rock of which mariners complain is not the one known as the Needles Eye, but that they complain of a rock situated some distance from the Needles Eye. As mariners are not given to the habit of complaining at random, and as they know that the Needles Eye has caused much trouble and damage, they are doubtless right in their remarks in this regard; and now that the Kingston News has pointed out another rock, which, it is claimed is still more dangerous, they have two causes of complaint, and we suggest that the News use its influence to have both removed, as it can be done at small expense.

In an article last week referring to a proposed change in the present system of signal lights, we insisted on the mode now in use, holding that the change as contemplated in Senator Bayard's bill would involve great confusion in our necessarily limited course of navigation and the crowded condition of our harbors, and that the system as advocated in the bill would not, in any respect, be a protection or add materially to the safety of our ships, unless, in a certain event, a combination of numbers of lights were made to guard against defective vision, that is two red and one green. We defined them in that way for the reason that red lights are more easily distinguishable and could not be so readily mistaken for ships' ordinary lights as the green. In the article referred to we quoted Commissioner Jarvis Patten as advocating the change recommended by the bill, in which we have done him injustice. We have just had the honor of receiving Commissioner Patten's first report, with his comments on the subject marked for our attention, in which he speaks very highly of the present system of lights, but refers to the double light system, and seems to be favorably impressed with the number system, to guard against defective vision although the commissioner puts it, two green lights and one red light in their respective places.

COLONEL POE'S figures, showing the traffic through the Sault canal, sent to the House of Representatives recently by Secretary Lincoln, are important as showing the rapid development of a great waterway, the business of which was reckoned inconsiderable in comparison with that of the lower lakes until within a few years. They justify the expenditures already authorized by Congress in improving the communication between Lake Superior and Lake Huron, and furnish strong arguments for further liberal expenditure in improving the navigation of the whole line of lakes.

WE have no use for party politics where measures for the improvement of rivers and harbors are concerned, therefore we trust that the commissioners provided for in the river and harbor bill for the examination of the various improvements now under way, and all new and meritorious projects, will be selected from the engineer corps of the army.

As was predicted by the RECORD last week the Senate has amended much of the good out of the inter-state commerce bill and provided for the temptation of a commission.

SEVERAL important communications stand over for insertion next week.

OBITUARY.

Mr. John J. Cannon died at his home, No. 94 Duane street, on the 30th of January, aged 61 years. The funeral took place on Sunday the 1st inst at 2 p. m. Mr. Cannon was a kind husband and father, a good neighbor and a true citizen, and one of the pioneers of Cleveland, having cast his lot here in 1843, when the now great city was a small hamlet by the river side. He was born in the Isle of Man, came to this country while quite young and on settling in Cleveland learned the trade of ship carpenter and calker, than whom there was no better, and perhaps took more contracts for calking than any one in this vicinity. In 1856 he became foreman of Stephens & Pressley's marine railway at this port, with whom he continued until the breaking out of the war, in 1861, when he went into the United States navy, where his knowledge of shipbuilding and maritime affairs was of much value and highly appreciated. On his return from the navy he engaged with S. F. Drake & Co. at their dock as foreman for three or four years, after which he was employed as foreman by Stephens & Pressley, at their drydock, until 1882. Mr. Stephens sold out his interest in the meantime. After working a short time for Mr. P. Smith his health failed and he has been unable to do business for the last year or two. Mr. Cannon was well educated and always posted on the important topics of the day, was much respected by all who knew him and now, after having lived an honorable and upright life, has gone to his reward, leaving his wife and three daughters well provided for.

STRICTLY PERSONAL.

Special Correspondent to the Marine Record.

ST. LOUIS, January 30.

I have had quite a trip lately and at last after a long series of snow drifts and the like I find myself in the great city of future expectations. I came from Cincinnati here direct, having been over there to attend the National Convention of Marine Engineers, and where I saw several of the lake boys, most of whom are known to the readers of the RECORD. Henry G. Payne whose articles in the RECORD last season, were widely read was on hand and happy until some one walked away with his brand new plug hat, in which "Hank" had deposited his wig. To assuage his grief the boys made him second in command of the association ship. But Mr. Editor, you ought to have seen Messrs. Doty, Steele, Chase and Thomson of your city.

Messrs Steele, and Doty, as every one knows, are acknowledged gallants, yet with all their eloquent glances and sweet words, Jimmy Chase carried off the laurels at the banquet. John Thomson, was not himself at all, the news of his wife's illness having broken him up. He left early in the fight. J. H. Fitzgerald, W. B. Lewis and E. D. Lock, distinguished themselves by their famous walk, on the trip to the Newport water works. Included in the party was Munson T. Britton, of the American Lubricating Oil Co., who learned the secret work of the order, one night at his room in the hotel in Cincinnati. The first time you see Britton ask him how it was. Among the noted literary gentlemen present was the Hon. John Fishhooks from Wild Cat Valley, West Va. In my next I shall give you a few points in the life of the new national president Andrew Ritter of Chicago.

THE SECOND ENGINEER.

THE RICHELIEU COMPANY.

The president and directors of the Richelieu and Ontario Navigation Company are busily engaged preparing their annual statement and report to be presented to the shareholders on the 17th prox. The statement will show a balance of some $40,000, carried forward and a larger number of passengers carried than for a great number of years. By the opening of navigation all the steamers will have been thoroughly repaired and overhauled, and the state rooms furnished and placed in the same style as on the Hudson river steamers. The boats will be furnished with electric lights and will be turned out in first-class order. The stock is rising gradually and is going into investment in large blocks.—*Kingston News.*

[*Continued from 1st Page*]

But it is probable it will be put over the term. Mr. Dimick is now at Los Angelos, Cal., and does not expect to return until spring.

Edward Smith and H. A. Hubbard, owners of the steambarge D. W. Powers, have sold a one-third interest in her to W. H. Bridges, of Bay City, and Allen C. McLean of East Saginaw, whose barges she will tow during the coming season. The consideration named is $6,000.

The railroad trains, not content to run on the land granted them by the government, have taken to the river. Two express cars in trying to sail up the river here were sunk at once, the conductor not understanding the rules and regulations for the government pilots. All the passengers were rescued, however.

FRANKFORT.

Special to the Marine Record.

The first passenger steamer owned in Frankfort was the sidewheeler Geo. S. Frost, in 1868.

Captain F. P. Williams, the diver and wrecker, well known in Frankfort, and whose schooner was seized by the United States marshal recently, is not discouraged, but is now busily engaged in building, at Manitowoc, a small steam scow of 45 feet keel, to engage in the wrecking business again in a small way and retrieve his fortune, in which undertaking we wish him success.

Captain Charley Butler, of Frankfort, is an old Lake Michigan sailor, and has been in command of many a fine schooner in the pioneer days on the lake. He has seen the country north of Milwaukee when the first settlers came to build their homes. He has seen Keweenaw and Ahnapee when there were but three or four houses there and the cargoes had to be rafted from the shore out to the vessel. On one occasion he lay fourteen days at Keweenaw with the schooner Col. Benton before they got the cargo on board. But time has changed all, and Keweenaw, which has shipped millions of feet of lumber, now imports the same from Michigan.

The scow Gladiator is now about forty years old and the only brigantine left on Lake Michigan, as vessels of this description are out of date and the fore and-aft style has crowded them out. But row at this late date, and in this her old days, her owner, Captain Steve Torrison, of Manitowoc, is putting in new gunwale strakes, railing, new lining, and other repairs, so that she will have a new lease as a schooner, and at the close we say farewell to the last of the old brigantine rigs on Lake Michigan.

Captain Thomas E. Matthews, Keeper of Point Betsy life station, and one of the best men in the service, has been elected lieutenant commander of Olivet Tent, Knights of Maccabees, of Frankfort.

Captain H. S. Read, formerly of Kenosha, formerly in command of schooners Ralph Campbell, Grace Murray, Geo. W. Wescott, A. J. Dewey, etc., has left the unsalted seas and is now the fat landlord of the Forest Avenue Hotel, in Frankfort.

Captain George Waters' tug is all planked and ready for calking.

There is a belt of drift ice about one-half to one mile wide abreast of Frankfort, and the harbor is frozen over, but a heavy gale will remedy the evil and drive the ice fields to the foot of Lake Michigan. C. B.

BAY CITY.

Last year the vessel owners whose craft were running into the Saginaw river, and engaged in the lumber trade, were often very seriously inconvenienced by not being able to locate their vesrels after they passed Detroit until they reached the river below this city, and in many instances were put to much needless expense by having tugs on the lookout between the lighthouse at the entrance of the river and the Charity islands. In order to remedy these difficulties, there is a proposition among vessel men to station a man at Port Huron to telegraph vessel passages to thsi city twice each day.

The towing association in this city among the tug men during the season of 1884 was quite a success; but it is thought it will fail the coming season, owing to several vessel owners being also tug owners, who refuse to enter into the combination. If they can be induced to join hands the association will be reorganized, otherwise the old cutthroat game will be played.

MILWAUKEE.

Special to the Marine Record.

The steamer Flint & Pere Marquette No. 1 wrecked at Ludington, has been raised and was got into the harbor on the 1st. Steamer No. 2 of the same line, which has been stuck in the ice off Ludington has also got into the harbor and is discharging her cargo. She was stuck in a field of ice thirty-five feet thick.

The following memorial to Congress has been prepared and forwarded by Secretary Langston, of the Chamber of Commerce, in accordance with resolutions adopted by the Chamber of Commerce:

"Your memoralist, the Milwaukee Chamber of Commerce, respectfully represents to your honorable body that the appropriations for harbor improvements at Grand Haven, Ludington, and Manistee, in the State of Michigan, are entirely inadequate to the needs of commerce passing through those ports during the winter months. The principal outlet for the products of Wisconsin, Minnesota, and Dakota is by the transportation lines crossing Lake Michigan from Milwaukee to Grand Haven, Ludington, and Manistee, which furnish the most direct routes from the northwest to the seaboard. To accommodate the immense traffic between the ports on the eastern shore of Lake Michigan and the northwest it is of the utmost importance that proper harbor facilities should be had at Grand Haven and Ludington. That such facilities do not exist has been shown by the recent loss of vessels and cargoes, due solely to the inadequate provisions of suitable piers. Recent appropriations of Congress have been barely sufficient to keep the piers at the ports above named in repair. Your memorialist prays that sufficient appropriations be made, at once, to put the harbors of Grand Haven and Ludington in such condition as may conduce to the safety of vessels entering those harbors, and thus furnish to the large and growing commerce of that portion of the country, tributary to Lake Michigan ports, such facilities as the importance of the interests involved urgently demand." X. Y.

MARINE CITY.

The annual stockholders' meeting of the Marine City Stave and Salt company was held Wednesday the 28th ult. The company's salt works produced, including salt in bins, 75,680 barrels. The following directors were elected; C. McElroy, St. Clair; Mark Hopkins, St. Clair; C. A. Calzin, Marine City; Chas. Root, Samuel Heavenrich, Benjamin Vernor and Harry J. Luce, Detroit. C. McElroy was elected president and treasurer, and Mark Hopkins vice-president. Frank McElroy, who has been secretary for the past eight years, will retire from the company.

OSWEGO.

Mr. A. J. Carpenter, superintendent of United States dredging, has closed a contract with the Vulcan Iron Works, of this city, for a dredge, to be used on the Louisville and Portland canal. During the last ten years the Vulcan Works have built two dredges for the government, which have given good satisfaction.

The Times says for some time past a number of parties interested in marine property have been considering the advisability of organizing a wrecking association to operate on the American shore of Lake Ontario and the St. Lawrence. At a meeting held in Oswego, Monday, and attended by Messrs. George Hall, J. K. Post, Thomas Dobbie and William D. Allen, it was decided to organize such an association. Within a few days steam pumps and other wrecking apparatus will be placed at Oswego, Clayton and Ogdensburg, so that the new company will be ready to begin operations in the spring. W. D. Allen will be the wrecking master.

TWO RIVERS.

On the 15th of January the tug Boss, owned by Allie & Lafond, which was tied up in the river broke loose and drifted out in the lake and probably sunk as all search for her has been unavailing. Previous to this the Boss had been damaged by fire, causing a loss of $50, and had been sunk in the river but raised by the life saving crew. The tug is valued at $3,000 and will be a heavy loss to the owners.

THE RULING PASSION OF HIS RACE.

A party of Israelites went out in a small yacht on a pleasure excursion. A gale arose and they were blown off the land. They were several days without food, amd despairing of being rescued, resigned themselves to die. They sank into a state of lethargy and were nearing dissolution, when the captain in charge of the little craft espied a vessel. He sprang to his feet, exclaiming:

"A sail! a sail!"

"A sale!" echoed one of the Israelites, feebly, a sale; vere ish de catalogue?"—*Boston Courier.*

AUXILIARY SAILS.

LOCKPORT, February 2.

To the Editor of the Marine Record:

In closing up for a time my contribution on auxiliary sails, I will say that the most vulnerable part of the vessel is her rudder. When that fails, especially in time of gales, the vessel becomes a helpless mass, and is soon destroyed by her own inertia. No one will dispute the point that if a vessel can take care of herself under all circumstances, it will largely reduce the percentage of disasters. In my former contributions I have given points by which a vessel can help herself, that is, a vessel built on the theory of the safety ship, by either laying to, head to the wind, or by holding and running a course at an angle of 45° from the course of the wind, to windward, without a rudder. I purpose to give, in this contribution, one more valuable point by which a vessel can run before the wind and can not change from it, with her rudder gone. I have pointed to the fact, in my previous contributions, that buoyancy is the counter to sail pressure. It is as much so in running before the wind as on any other course. The arm of buoyancy should be as long as possible forward of the sail, so as to prevent the bow from being pressed down by sail pressure. Thousands of long, narrow, low vessels have been run under water by having the sail too far forward. The only point gained by having the sail forward is to prevent yawing and to allow easy stearing, by having as long a tail abaft the sail, which must follow the point of propulsion. The anecdote of the two Indians who had a bush in the bow of their canoe, for a sail, which was driven under by a squall, will be a simple illustration of this principle. Just as the canoe was going under one Indian said to the other: "Too much bush." It was not possible to go forward to remove the bush, and it can be seen at a glance that had the bush been at the other end of the canoe, it would have had all of the buoyancy of the canoe to prevent her running under. Like all else, in my theories of safety, to attain my objects, I use the direct opposite to that which is now used, and I have attained all of them. In my safety ship, in running before the wind I have the sail as far aft as I can get it, without breaking up my combination of setting sails for other courses. The form of the satety ship is such that she can not possibly careen under any circumstances. This obviates the horrible rolling motion often experienced while running before high winds with other vessels. The cause of this in other vessels is misplaced buoyancy, which creates vacuums into which the vessel alternately falls. The form of the safety ship is such that, before the wind, or on any other course, she can not dive or pitch, and must run steady. All of the above motions are prevented by the displacing and replacing lines, which are such as to have no misplaced buoyancy for sail pressure to act upon; also, they are such that no vacuums can ever form under the vessel, and she always runs level up to the degree of speed for which she is designed. The displacing and replacing lines are mathematically determined, and the factor from which they are derived is the degree of speed the vessels are expected to make. They differ for same width of vessel: in the vessel for great speed the lines and the vessel are longer, than they would be for less speed. The displacing and replacing lines meet at just one-third of the vessel's length from the sternpost. The masts of the satety ship are located at this point, one on each side of the vessel, and in running before the wind three lower sails are carried on these two masts, which are her mizzen masts, opposite to each other. Each of these masts has a fore and aft sail on it before the wind. These are carried "wing and wing." Between the two masts a large square sail is hoisted up on a yard. These three sails are all in one plane, with a surface of more than twice the width of the vessel, and as long or high as it is practical to have them, and are all of them handled on deck. These sails have two-thirds of the buoyancy of the whole vessel as a counter to sail pressure, which prevents any of it being lost downward, and the form of the ship being such as to prevent rolling, none of the wind packing force can be lost when running before the wind. The resistance to a vessel's passage through the water creates powerful wind packing in the sails, which reacts upon the on-coming wind and greatly adds to its power. Steadiness of the vessel will retain this. This increased wind power is fully illustrated on the ice-boat, which before the wind will run away from it with the power of the packed wind, until the wind catches up with her to give her another charge of packed wind. In sailing before the wind, all other vessels which have centerboards, haul them up to increase their speed. A hold-on of any kind is a great drag on a vessel on any course, but less before the wind than on any other course, and before the wind, as they are rigged, they should have as little as possible. The safety ship can have a centerboard if necessary, for light wind on it, but in high wind on it she can get along well without any keel of any kind. But to sail before it without a rudder she must have a centerboard located just before her rudder post. With this down, running before the wind, she can not possibly change her course. It must be adjustable, so that just enough can be used. It will be observed that her propulsion power, before the wind, is near the stern. The principle why she holds her course with the aid of her stern centerboard is precisely the same as the feather in the end of the arrow, or the conical bullet, both of which are driven onward by a power at their back end. I have built several sailboats on these principles, and have tested them in all kinds of weather.

The first and most important point to be gained for auxiliary sails is steadiness of vessel. This I have gained with the principles of the safety ship. Another point of equal importance is the combination of sails to be handled on deck, such as will be ample to meet steam speed when the speed of the wind is greater than that of the steam. This I have on the principles of the safety ship. Another point, and one of safety, is to have the vessel propelled safely, if both steam and rudder have given out. Another vital point is to give the vessel, as long as she is afloat, a power to take care of herself, if sail and steam are both gone. This I have got. The safety ship can drift comfortably in all positions. It is not possible for the waves to distress her, or mount to her deck, and she will be safe in the most violent storms, and comfortable. There can be no question on this head, as it has been fully tested, and is clearly to be seen in her theory by scientists. Keep the ball rolling until Congress calls a board of scientists together to prove the truth of the theory.

Yours truly,

JOSEPH W. NORCROSS.

EMINENT BRITISH SHIPBUILDERS AND MARINE ENGINEERS.

Special Correspondence Marine Record.

NEW YORK, February 2.

The statement made in the London Times recently, to the effect that Ismay, Imrie & Co., of Liverpool, Eng., would shortly close a contract with Harland & Wolff, of Belfast, Ireland, for a new Atlantic steel steamer, to be used in the White Star Line, between Liverpool and New York, recalls a visit paid to that great shipbuilding establishment some years ago.

John Elder, who has been dead for many years, founded the greatest shipbuilding firm in Great Britain, which is still carried on under the old name, John Elder & Co., by Wm. Pearce and A. D. Bryce Douglass, one of the leading, if not the greatest, marine engineer the United Kingdom has ever known. He may be called the father of the modern marine engine which propels such vessels as the Alaska, Oregon, Umbria, and Etruria. They employ an army of no less than 7,000 workmen, when they are running on full time.

Next greatest in the United Kingdom, as shipbuilders and marine engineers, comes Harland & Wolff, of Belfast, Ireland. The founder of this vast establishment, E. J. Harland, was born in Scarborough, Eng., in 1831. His father was a warm personal friend of George Stephenson, and through his influence the subject of my sketch was made a pupil at the great engineering works of Robert Stephenson & Co., Newcastle-on-Tyne. When E. J. Harland was a boy wooden shipbuilding was extensively carried on by Wm. and Robert Tindall, in his native town, Scarborough. William Tindall was one of the half dozen shipbuilders and owners who founded "Lloyds." By observing the operations of this firm young Harland became an expert at making the neatest and fastest model yachts in the vicinity. At an early age he was sent to the Edinburgh academy where he remained two years, studying the most important branches of education. His greatest delight was to study drawing, geometry and Euclid. When he had reached the age of fifteen he was bound an apprentice to the firm whose name is known to-day thoughout the civilized world, Robert Stephenson & Co., for five years. The first four years of it were spent in the various workshops, and the last one in the drawing office. In 1850 his grace, the late duke of Northumberland, offered a prize of £100 for the best model and design for a lifeboat. Some 280 designs were submitted, and among them was one from E.J. Harland, some of the principles of which have since been introduced with advantage into shipbuilding. The prize was awarded to James Beeching, Great Yarmouth, Eng., whose plans were afterward generally adopted by the lifeboat society. On his twentieth birthday, in May, 1851, young Harland, being out of his time, was at once entered on the books as a journeyman at £1 (five dollars) per week. After working a few months at a sovereign a week he procured a letter of introduction to James and George Thompson, of Glasgow, the builders of the beautiful and fleet National Line S.S. America, than which no handsomer model ever left the Clyde. The works of Robert Napier & Co. were then at the top of the tree. As an illustration of how contrivances, excellent in principle but defective in construction, may be discarded and again taken up under more favorable circumstances, he mentioned having seen a Hulls' patent surface-condenser thrown to one side from a steamer, because of the difficulty in keeping them tight. And yet, in the course of a very few years, by the simplest possible contrivance, inserting an india-rubber ring round each end of the tube (Spencer's patent,) surface condensation in marine engines came into vogue, and there is probably no ocean-going steamer afloat without it to-day, furnished with every variety of suitable packings. Without solicitation Mr. Harland was made head draughtsman by the Messrs. Thompson, a position which he enjoyed until called away by Tom Toward to become the manager of his shipyard on the Tyne, in 1853, at St. Peter's, two miles and a half from Newcastle. During Christmas week, 1854, an advertisement appeared in the Newcastle Chronicle, for a manager to conduct a shipbuilding yard at Belfast, Ireland, which was situated on what was then known as the Queen's Island, but now, like the Isle of Dogs, near London, it has been attached by reclamation. The yard, about four acres in extent, was held by lease from the Belfast harbor commissioner. It was well placed, alongside a patent slip, with clear frontage, allowing of the largest ships being freely launched. The first ship ever built there, the Mary Stenhouse, was launched January 2, 1855, by Robert Hickson & Co., the proprieters of the Queen's Island Shipyard.

Mr. Harland remained with these people three years, after which he bought them out and engaged extensively, not only in shipbuilding, but also in raising and repairing wrecked vessels. He was aided materially in purchasing this property by the kindness of the uncle of G. W. Wolff, Esq., who became his partner and life-long friend. Thus, in 1858, the firm of Harland & Wolff, of Belfast, Ireland, was established. Mr. Wolff served his apprenticeship with Sir Joseph Whitworth & Co., of Manchester, England, and had just returned chief engineer of a Mediterranean steamer when he was invited to join Mr. Harland. No sooner had this firm been organized than the firm received an order from James Bilby, Sons & Co., Liverpool, for three screw steamers, (the Venitian, Sicilian and Syrian,) each 275 feet long by 34 feet beam, 22 feet 9 inches hold. The vessels were successfully launched the following year, and were the pioneers of what has since become known as "Bilby's Coffins," not because of their unseaworthiness, but because of their length and narrowness in comparison with the short and wide steamers of that day. Many predicted that such long and narrow vessels would prove a failure. But experience has shown the contrary. For the future steamers built for Bilby's Line were longer: Length, 310 feet; beam 34 feet; depth or hold, 24 feet 9 inches, with the upper deck all of iron. In this way the hull of the ship was converted into a box-girder of immensely increased strength, and was the very first ocean steamer ever so constructed. The rig, too, was unique, owing to the four pole masts being all in one piece and of the same height without any yards, thereby reducing the number of hands necessary. By using Spencer's improvement on Hull's patent method of surface condensation on these steamers some twenty-five per cent of fuel was saved.

In order to give larger carrying capacity to the steamers, Harland & Wolff gave flat bottoms and square bilges. This style became known in Liverpool as the Belfast bottom, and it has been generally adopted. This form not only serves to give stability, but increases the carrying power without lessening the speed. The next order from Bilby's was for a steamer of 360 feet length and 34 feet beam, which was called the Venetian. She was the beginning of the straight stem steamers, which soon grew into favor among British owners. (I believe the old American Collins Line of paddle steamers had perpendicular stems.) They were also the first to introduce Portland cement and tiles into the spaces between frames, instead of chocks of wood. The success of long steamers having been established, they were entrusted with the lengthening, 63 feet, of the Hecla, Olympus, Marathon, and other vessels belonging to the Cunard Line. The harbor commissioners had, about this time, connected Queen's Island to the mainland, thereby adding several acres to the shipyard of Harland & Wolff. With increased facilities and room they secured the contract to build the gun vessel Lynx, and others, for the British government. The yard, being surveyed by the admiralty, was placed on the first-class list.

At the opening of the Suez canal orders poured in thick and fast for steamers adapted for trade with the Antipodes. The first of these was the Iberian, of 390 feet keel, which was square-rigged, with the yards for the first time fitted on travelers.

In 1869 T. H. Ismay, of the White Star Line, ordered the first of their fleet of steamers, the Oceanic, which were constructed on the vertical, overhead tandem type, with five feet stroke. The men in their employment then, were of their own training; the foreman had been promoted from the ranks; the manager, Mr. W. A. Wilson, and the head draughtsman, Mr. W. J. Pirrie, (since become partners,) having, as pupils, worked up through all the departments, and ultimately won their honorable and responsible positions by dint of merit only; by character, ability, and perseverance, their whole heart and soul being in the work. In March 1871, under command of Captain, now Sir Digby, Murray, Bart, the Oceanic set sail for New York from Liverpool, with the house flag of the White Star Line proudly flying from the main. She was the first ocean steamer fitted with a turtle back forward and aft, and also the first to use the direct-acting spiral spring (similar to those used in locomotives,) in connection with the compound engine, to prevent the puffs of high pressure steam from escaping by the irregularity of the safety-valve weights, when she pitched and dived into the head seas. Spiral springs are used extensively now on marine boilers. The last large steamers, the Brittania and Germania, were 455 feet keel, 45 feet beam, 33 feet hold, and of 5,000 indicated horse power. The Brittania was constructed with the propeller fitted to work below the line of keel when in deep water, by which means the racing of her engines was avoided. By this means increased speed was gained, but the vibration was greater than the passengers cared for, so the old method of fixing the propeller was adopted.

In the fall of 1867, if I may be permitted to write backward a few years, a serious accident occurred to the mail paddle-steamer Wolf, belonging to Glasgow. While passing out of the Lough, about eight miles from Belfast, she was run into by another steamer and sunk. Being in a dangerous position to navigation, it was necessary that she be removed, either by dynamite, gun powder, or some other explosive, but Harland & Wolff, ever active and energetic, took upon themselves the task of lifting her. After many unfortunate failures, they were crowned with success, and after repairing the damages to hull and machinery, sent her on her way rejoicing, much to the satisfaction of the owners and underwriters. This incident advertised them so well that the British Shipowners' Co., limited, of Liverpool, gave them an order for the steamer British Empire, which was followed by many more from the same firm. T. and J. Brocklebank, another Liverpool firm of world-wide repute, for their fine fleet of East Indiamen, entrusted to their care the building of the large iron ship Candahar, which was afterward duplicated by the Belfast, still larger and finer.

In the winter of 1882-3 they built for the Irish Shipowners' Co., of Belfast, the four-masted steel ship Lord Wolseley, of 2,500 tons net register, which carried 100,000 cases of oil from Philadelphia to Nagasaki, Japan, last summer. They also constructed the W. J. Pirrie and the Walter H. Wilson, both being upward of 2,500 tons register, and the steel ship Garfield, of 2,323 tons register, for Ismay, Imrie & Co., of Liverpool.

In 1880 they bought more reclaimed land from the Belfast Harbor Trust, the works now comprising forty acres of ground, with ten building slips suitable for the largest vessels.

Among their best friends have been J. P. Corry & Co., of Belfast, for whom they built their first iron sailing vessel, the Jane Porter, in 1860, and who have always ordered from them since. Their famous Star Line of sailing ships, from London to Calcutta, were built by them, the last of them, the Star of France, and the Star of England, being the largest, each 2,200 tons register.

In addition to building a vast shipbuilding and marine engineering works themselves, they have aided their former draughtsmen, Clark, Workman & Co., in starting in the same line of business right in Belfast. This is such a rare good quality—for one firm to aid a rival in the same business—that it deserves special mention.

Mr. G. W. Wolff is also one of the foremost men, (president) in the Belfast Ropework Co., an enterprise which gives employment to hundreds of men and boys. Their own shipyard employs 5,000 hands in ordinary good times. As I close this tribute to the indomitable energy and perseverance of the firm of Harland & Wolf, it gives me great pleasure to say that the Hon. E. J. Harland, of whom I have written, has just been elected mayor of Belfast, Ireland.

G. FOSTER HOWELL.

The Bay City test salt well has reached 2,570 feet.

The Mackinaw Lumber Company will put into the Carp river this winter about 10,000,000 feet of logs, and at Black river about 6,000,000 feet. Last winter the company put in at the two points about 14,000,000 feet, and carried over about 7,000,000 feet. This winter it carries over about 2,500,000 feet.